

REMARKS – General

By the above amendment, the applicant has amended all the claims to define the invention more particularly and distinctly so as to overcome the technical 5 rejections and define the invention patentably over the prior art.

Claim Objections have been overcome

The last O.A. objected the Claims 28 and 31. Both Claim 28 and Claim 31 have been amended to avoid technical rejection. Applicant requests 10 reconsideration of these objections.

Claim Rejections under 35 USC § 112 have been overcome

The last O.A. rejected the Claims 28. Claim 28 has been amended to avoid 15 technical rejection. Applicant requests reconsideration of this rejection.

The last OA points out that term "client operation function" of claim 28, 30, and 36 is not defined in the specification. Claim 28, 30 and 36 has been amended as: "said PMAD has multimedia and data communication function means corresponding with said server means," to match with specification in "Fig.3 is a 20 function block diagram shows the design of the Personal Mobile Access Device (PMAD) of the present invention" and its specification.

Regarding the operation of how server means guarantee PMAD-to-PMAD communication over the Internet: (A) The communication of present invention encodes and packages original multimedia information and data into message 25 units (TDMU) and transmits these TDMU over TCP/IP Internet connection (Page 3. summary, page 9, Operation, paragraph 2). (B) The communication system of the applicant's current invention forms 2 virtual paths for data communication and link/access control, the TDMN servers being the key part of the message communication path (Fig.1, 112 and 113 and their description page 6), one of the

main function of the TDMN servers (The server means) is to secure, control and spool communication messages, as "stored TDMUs to that PMAD (30) when it is presence to the TDMN (10) next time" (page 8, Operation, paragraph 1, page 10 lines 8-10). By combining (A) and (B) operations, all of the original message is 5 guaranteed among PMAD communication.

The last OA also point out that "Time Distributed Message Network" needs to be defined in claims 30 and 36. Claim 30 and 36 has been amended accordingly to avoid this rejection as "Internet based message communication network 10 (TDMN) including server means connecting to Internet and TDMN operation function means."

Claim Rejections Under 35 USC § 103

15 Claim 28 is rejected under 35 U.S.C 103(a) as being unpatentable over Dowling US 20050170824 in view of Gentry (US 6,888,803).

Dowling is a completely different system compared with the applicant's current invention. Although Dowling has wireless network side of implementation, which comprises wireless AP and a server with Internet connection. (fig.1, 150, 20 113, 122 and 125), Dowling's mobile unit has three antennas (radios) (fig.1, 110, 140, and 145), antenna 110 (first air interface) and cellular phone network form the primary part of communication system while server 125 is a wireless network access management server, as per "The management session is initially supported by a first air interface such as the air interface connection 112. The management session 25 is established with a network server such as the network server 125" [0059]. Server 125 only provides initial wireless resource information for mobile unit 150 to access wireless network. This is different from the applicant's current invention wherein the server is part of the communication path. (see discussions before). In conclusion, although Dowling has wireless AP and Internet connection in the

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embodiment, due to the different functions of mobile unit and server, it is complete different from the communication of the applicant's current invention.

It is technically impossible to combine Dowling and Gentry. In Dowling's embodiment, there are mobile communication functions over wireless LAN access to Internet; however, Gentry's VoIP implementation "provides a mechanism to handle all services from a single switch point by providing a voice over IP (VoIP) connection between the mobile's serving base station controller and its home switch." (col.1 lines 47-50). When Dowling's mobile device (fig.1, 105) is communicating with AP (fig.1, 150) to Internet and server (fig.1, 122 & 125), Gentry's VoIP view cannot apply because Gentry's VoIP is provided over the other path (the cellular phone network), which is Dowling's mobile unit (fig.1, 150) communicating over cell phone wireless network (fig.1, 112) and switch (fig.1, 115).

For the purpose of discussion, it is hard to combine Dowling and Gentry even only on the cellular phone network side of operation because new equipments are needed, e.g. "A base station controller gateway (BGW) is a new component which serves as the interface between an existing base station controller and the IP network. The base station controller gateway provides a client which is responsible for converting the call control signaling (e.g., IS-634 for CDMA) and voice channel signaling from the base station controller (BSC) to a protocol for use in the IP network (e.g., H.323)." (col.2 lines 37-43), also a "mobility gatekeeper (GK) is responsible for establishing connections and providing a platform for network mobility service" (col.2 lines 54-56), for VoIP operation "A mobile switching center gateway (MGW) is used as the interface between the data network and the legacy network whenever an inter-system handoff is performed to a non-VoIP system". More importantly, Gentry only uses VoIP protocol for a proprietary IP or Data network (fig. 2 100) and not the Internet. In order to combine Dowling and Gentry, Dowling's packet transport interface has to be modified to connected to Gentry's IP or ATM packet network (fig.2 100), and

doing so will cut out Dowling's network server 125's (fig.1) communication with cellular network (fig.1, 120, 130, 135, 115 and beyond).

10 VoIP is an IP layer 4 application over UDP protocol. The QoS is implemented on a packet priority mechanism and there is no error correction or prevention of broken communication. The quality and reliability is vulnerable to Internet communication, and messages (UDP packets) can be dropped any time. It is very hard to maintain QoS over unmanaged Internet. The communication of the applicant's current invention is based on the TCP/IP protocol; just the communication protocol alone is already much more robust than typical VoIP communication.

15 Therefore, the applicant suggests that combining Dowling with Gentry is technically impossible and improper. The applicant respectfully requests withdrawal of this rejection.

20 15 Regarding claim 29, the last OA "(Dowling: mobile unit 105 leaves subnetwork, system level handoff assisted by server 125 is needed,) and communicate with said server means and other PMADS (Gentry: voice over IP connection between mobiles, col 1 lines 47-50)".

25 20 The applicant respectfully points out similarities to discussions regarding to rejection of claim 28. Gentry only provided a VoIP solution for cellular phone networks. If Dowling's mobile unit 105 does roaming with a cellular phone network and performs VoIP roaming communication with other mobile units via cellular phone network, as suggested by last OA, then this is a completely different mobile roaming communication from the applicant's current invention. If Dowling's mobile unit 105 does roaming with wireless side of feature via the help of server 125 as suggested by last OA, however, since Gentry only provides the VoIP implementation for the cellular network, it is impossible to combine Dowling with Gentry to perform VoIP roaming with Dowling's mobile unit 105 over the wireless LAN network. Further, due to the UDP-based communication protocol

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and the nature of VoIP service, even if Dowling performs VoIP roaming communication, the current session would be terminated due to the fact that the mobile unit has to leave one wireless LAN and join the next one if there is one. The current session will be gone. Although it is possible to start a new session, it 5 is impossible to recover the information of the previous uncompleted session because the message would be lost since the typical VoIP server does not have the function to store VoIP packet for the clients.

The roaming of the applicant's PAMD is guaranteed by the server means with no message lost (see discussions regarding claim 28), this is much more 10 advanced then the solution even if Dowling was to combine with Gentry.

Therefore, the applicant suggests that combining Dowling with Gentry is improper. The applicant has amended claim 28 more particularly and distinctly. The applicant respectfully requests withdrawal of this rejection.

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Conclusion

20 For all of the above reasons, the applicant submits that the claims are now in proper form, and that the claims all define patentably over the prior art. Therefore he submits that this application is now in condition for allowance, which action he respectfully solicits.

25 **Conditional Request For Constructive Assistance**

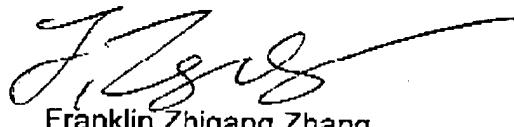
Applicant has amended the specification and claims of this application so that they are proper, definite, and define novel structure which is also unobvious. If, for any reason this application is not believed to be in full condition of allowance,

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Applicant respectfully request the constructive assistance and suggestions of the Examiner pursuant to M.P.E.P. § 2173.02 and § 707.07(j) in order that the undersigned can place this applicant in allowable condition as soon as possible and without the need for further proceedings.

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Very respectfully,



Franklin Zhigang Zhang

4717 Spencer St.
Torrance, CA 90503
Tel: (310)901-2631
Email: endeavour@franklins.com

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